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Cooperative Economic Insect Report

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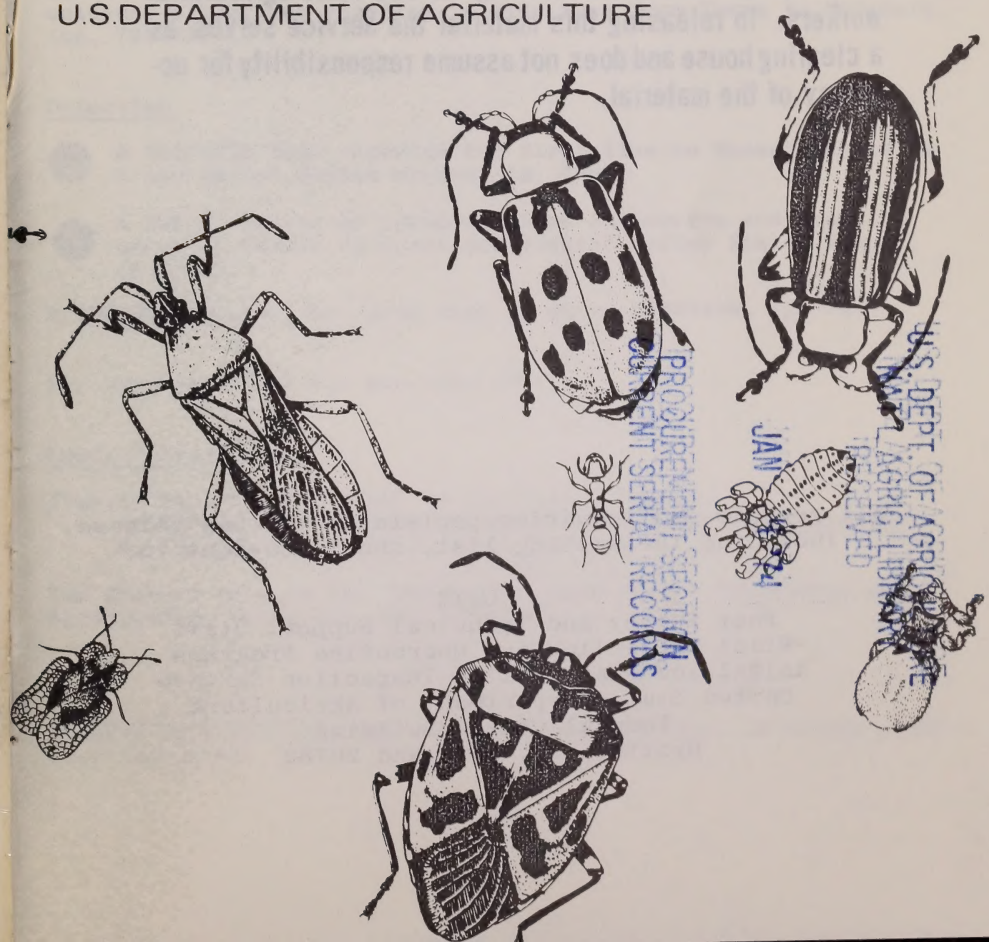

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The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 23 October 26, 1973 Number 43

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG continued problem on some wheat in northeastern New Mexico. (p. 723).

EUROPEAN CORN BORER fall survey indicates overall population decline in Minnesota for fourth straight year, but statewide population in Illinois about four times that of 1972. (pp. 723-724).

FALL ARMYWORM continued problem on small grains, grasses, and forage in some areas. (pp. 724, 725).

SOUTHERN PINE BEETLE damage continues severe throughout Southeast; epidemic situations reported in wide area from Texas to Virginia. (pp. 727-728).

Detection

- A BRACONID WASP reported for first time in Massachusetts is a new United States record. (p. 729).
- A THRIPS collected for first time in Georgia and known to occur in Hawaii is a new continental United States record. (p. 727).

A THRIPS reported for first time in South Carolina. (p. 727).

For new county records see page 729.

Special Reports

Insects Not Known to Occur in the United States.
CORRECTED COPY for "South African Grain Bug (*Macchiademus diplopterus* (Distant)". (pp. 733-734).

The Strange Fate of the "Serpentine Leaf Miner" (*Liriomyza* spp., Agromyzidae, Diptera). (pp. 735-736).

Reports in this issue are for week ending October 19 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING OCTOBER 22

Reprinted from Weekly Weather and Crop Bulletin supplied by Environmental Data Service, NOAA.

HIGHLIGHTS: Fall began to invade the East. Richmond, Virginia, and Raleigh, North Carolina, fell below freezing Thursday morning and there were snow flurries in the northern Appalachians early Saturday. The West had higher than normal temperatures in contrast. Several record highs were broken in the Southwest on Wednesday. Nationwide it was dry. No rain fell at all over most of the Nation. Only spots in Texas, the Deep South, and the Pacific Northwest had 2 inches of rain or more.

TEMPERATURE: The season began to turn in the East fairly close to schedule. Temperatures mostly averaged within 3 degrees of normal not withstanding some subfreezing temperatures after midweek at several mid-Atlantic cities and in the upper Mississippi Valley. Western temperatures averaged mostly above normal. Southwestern desert areas, some Rocky Mountain areas, and part of Montana averaged 9 degrees above normal. One Colorado area averaged 15 degrees above norm. While several record highs were recorded in the Southwest, the Northwest stayed mostly above the freeze mark except for high mountain areas. Many western mountain areas were below freezing on Monday but the Nation's coldest area was in the Green River Valley where Big Piney, Wyoming, recorded 21 degrees. Meanwhile, Miami, Florida, enjoyed the highest overnight low of 76 degrees. Later Monday, a Canadian High pushed cool air into the Plains, Mississippi Valley, and the Lake States and, by Tuesday, a cold mass of air extended from eastern New Mexico to the Virginia coast. Temperatures stayed in the 50's from the northern Plains to the east coast along the northern tier of States. Weather of the week continued on page 732.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMYWORM (Pseudaletia unipuncta) - VIRGINIA - Larvae heavy in grain field in Pulaski County October 12. Damage ranged up to 50 percent of foliage. (Young). OKLAHOMA - Light numbers mixed with heavy population of Spodoptera frugiperda (fall armyworm) noted in field of rye in Washita County. Field treated. (Okla. Coop. Sur.).

CORN EARWORM (Heliothis zea) - WISCONSIN - Found in scattered fields of corn throughout survey region but more concentrated in Chippewa, Eau Claire, Taylor, and Wood Counties. (Wis. Ins. Sur.). NEW MEXICO - Larvae ranged 3-5 per stalk in field corn south of Portales, Roosevelt County. Stalk lodging in area heavy in some cases. (N.M. Coop. Rpt.).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Populations continued to exceed acceptable levels in several fields throughout fall wheat area of northeastern part of State. Treatments applied. (N.M. Coop. Rpt.). TEXAS - Isolated infestations noted on wheat in Kinney County. (Stewart). Surveys conducted September 28 through October 3 in 11 Panhandle counties showed following maximum counts per row foot of wheat by county: Potter 50, Hartley 1, Dallam 1, Randall 150, Swisher 10, Briscoe 5, Floyd 5, Oldham 80, Deaf Smith 10, Castro 100. None reported on Johnson grass in these 10 counties. In Hall County, none found on wheat but high count of one found on Johnson grass. (Daniels). KANSAS - None found in most wheat fields in several southwest, south-central, and southeast district counties. Occasional infestations noted usually very light. Maximums per drill row foot by district as follows: Southwest (Haskell County) 3; south-central none; southeast (Wilson County) 2. (Bell).

PICKLEWORM (Diaphania nitidalis) - TEXAS - Infested two cucumber fields in Uvalde County. (Stewart).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARIZONA - Averaged 18,000 per 100 sweeps in field of Mesa Sirsa alfalfa at Dome Valley, Yuma County. Controls applied. (Ariz. Coop. Sur.). WISCONSIN - Completed transition, all specimens examined contained eggs. Averaged 5 per 10 sweeps in central area alfalfa, about 10 percent of specimens parasitized. (Wis. Ins. Sur.).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - MINNESOTA - Fall survey complete. Showed overall decline in population for fourth straight year. Decrease greatest in southwest and west-central districts; down from 61 borers per 100 plants in 1972 to 21 in southwest district and from 131 per 100 plants in 1972 to 62. Increase from 30 to 46 borers per 100 plants noted in southeast district, and from 44 to 61 borers per 100 plants in east-central district. In northwest, south-central, and central districts populations remained virtually unchanged. (Minn. Pest Rpt.). WISCONSIN - Although populations not as heavy as in past years, damage seems greater. Average for State 76 larvae per 100 plants, average in 1972 was 29 per 100 plants. (Wis. Ins. Sur.). ILLINOIS - Fall survey of field corn conducted in 43 counties for second-generation borers indicated statewide population in 1973 to be about 4 times heavier than 1972. Average of 126 borers per 100 stalks in 1973 is near past 11-year average of 105 per 100 stalks, but well above

all-time low average of 32 per 100 stalks in 1972. First generation of Ostrinia nubilalis this year was very light. Heaviest fall infestation of 246 borers per 100 stalks found in west district; county averages very consistent in this district except for Adams County with highest county average in State of 658 per 100 stalks. Increase in State populations may be due to larger acreage of late-planted corn as result of unfavorable spring weather. (Cooley). TENNESSEE - Taken in Hamilton County October 12 by L. Greene and R. Harris; damage light in Carroll and Benton Counties; also taken in Decatur County. These are new county records. Light to moderate damage to corn noted in Hawkins, Hancock, and Johnson Counties. (Guillin).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KENTUCKY - Conditions indicate yield of early planted corn very good but late corn more severely damaged in western area. In many areas, more damage caused to corn by this pest than by Ostrinia nubilalis (European corn borer). Surveys for D. grandiosella negative in Larue and Nelson Counties. Larvae collected from roots of corn in Hart County October 12, 1973, by D.E. Barnett. Determined by D.E. Barnett and confirmed by W.W. Gregory. This is a new county record. (Barnett). TENNESSEE - Detected on corn in Hamilton County October 12. Determined by L. Greene and R. Harris. This is a new county record. (Gordon, Bruer).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Caused some damage to ears of late corn in Texas County. (Okla. Coop. Sur.). WISCONSIN - Corn ear infestations mainly restricted to Ozaukee, Sheboygan, Manitowoc, Kewaunee, Door, Outagamie, and Winnebago Counties. (Wis. Ins. Sur.).

SORGHUM MIDGE (Contarinia sorghicola) - ALABAMA - Ovipositing adults ranged 2-15 in blooming seed heads of late grain sorghum and Johnson grass in three Macon County fields. No damage expected, but with heavy Johnson grass seed heads present, suitable overwintering conditions present to sustain heavy populations in hibernation. (McQueen).

SMALL GRAINS

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Heavy beating rains and some flooding destroyed most of small larvae (see CEIR 23(42):712) in Cowley, Sumner, Harper, and Sedgwick Counties. Infestations still heavy where rainfall lighter in Chautauqua County and southeast Cowley County. No serious wheat infestations noted in many other southern counties. In southeast district, S. frugiperda generally ranged none to trace with up to 2 larvae (first and second instars) per row foot noted in isolated cases in Cherokee, Elk, Wilson, and Montgomery Counties. Usually none, but occasionally trace infestations found in south-central district. Trace infestations occasionally found in Stevens, Seward, Haskell, and Grant Counties, none found in Finney and Morton Counties. (Bell). MISSOURI - Light in wheat and barley in east-central and central areas. Ranged 1-6 larvae per row foot. Spots in 2 wheat fields completely defoliated by second and third-instar larvae. (Munson). OKLAHOMA - Ranged up to 12 per square foot in field of rye in Washita County, ranged 6-8 per linear foot in wheat

in some areas of McClain County. Generally light in fields checked in Blaine, Roger Mills, Custer, and Beckham Counties. Light to moderate in Garfield County, light in southwest counties. (Okla. Coop. Sur.). NEW MEXICO - Spodoptera frugiperda counts ranged up to 3 per linear foot of wheat around Portales, Roosevelt County. (N.M. Coop. Rpt.). TEXAS - Activity heavy in isolated small grain fields in Kinney County. Control successful. (Stewart). MISSISSIPPI - Damage moderate to heavy to young wheat in the Delta and southern areas. (Robinson). ALABAMA - First to third-instar larvae heavily infested 20 acres of small grain in Elmore County. Field, previously in corn and harvested earlier, now with 50 percent stand of 18-inch tall volunteer corn. Larvae feeding on small grain and corn. Lighter population of small larvae observed feeding on volunteer grain sorghum in 30-acre field. (McQueen).

TURF, PASTURES, RANGELAND

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Heavy on newly sown grasses in Greene, Knox, Jefferson, Sevier, Loudon, Monroe, and Roane Counties. Treatments applied. (Hammett, Mullett). MISSISSIPPI - Still heavy and damaging to permanent and temporary pastures in southern areas. (Robinson). ARKANSAS - Still problem and required treatment to pastures in State. (Boyer). TEXAS - Increased activity noted on lawns in several south-central counties. (Cole). KANSAS - Second-instar larvae averaged 2 per row foot in drilled 5-inch fescue in Cherokee County. (Bell).

SAY STINK BUG (Chlorochroa sayi) - NEVADA - Adults ranged up to 30+ (average 5) per plant on Atriplex sp., Chrysothamnus sp., and Gutierrezia sp. on rangeland in large areas of southern Nye and Clark Counties. (Bechtel, Zoller).

SOUTHERN FIRE ANT (Solenopsis xyloni) - TEXAS - Numerous mounds of this ant and S. geminata (fire ant) noted on home lawns in Pearsall, Frio County, and in College Station, Brazos County. (Bradshaw, Green).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - OKLAHOMA - Adults averaged 6 per 10 sweeps in alfalfa field in Mountain View area of Kiowa County; ranged 6-8 per 10 sweeps in Jackson County. (Okla. Coop. Sur.). MISSOURI - Light to moderate in alfalfa in east-central and central areas, ranged 2-16 adults per 10 sweeps. Oviposition appeared very light, very few fresh egg punctures observed in fields checked. (Munson). IOWA - Adult counts per 20 sweeps in alfalfa by county averaged as follows: Decatur 6, Lucas 4, Warren 3, and Wayne 1. Larvae per 20 sweeps averaged as follows: Decatur 11, Lucas 2, and Warren 6. (Iowa Ins. Sur.).

FALL ARMYWORM (Spodoptera frugiperda) - ARKANSAS - Still problem in forage crops in scattered areas over State. (Boyer).

PEA APHID (Acyrthosiphon pisum) - ARKANSAS - Increased slightly, 150-200 per 100 sweeps taken in northwest area alfalfa. (Boyer).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Averaged 250 per 100 sweeps of alfalfa in several Yuma County fields and 2 Maricopa County fields. Some girdling reported. (Ariz. Coop. Sur.).

SOYBEANS

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - MISSISSIPPI - Larvae very heavy, ranged 5-6 per row foot of soybeans in Issaquena County; 1,000 acres defoliated. Most soybeans mature enough that no treatment necessary. Soybeans planted in late July treated. (Robinson). NORTH CAROLINA - Growers concerned about severe defoliation in some areas; larvae averaged 50+ per 5-foot sample in many fields over Coastal Plain. Natural foliage drop occurring in most fields; little yield reduction expected. (Hunt).

GREEN STINK BUG (Acrosternum hilare) - OKLAHOMA - Ranged 1-3 per 5 row feet in soybeans checked in Wagoner County; averaged 1 per 5 row feet in Muskogee County. Ranged light to moderate in Sequoyah, McIntosh, and Le Flore Counties. (Okla. Coop. Sur.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Developing larvae, pupae, and adults heavy on cotton as usual for time of year in all fields examined in Macon, Marengo, Dallas, and Sumter Counties. (McQueen).

BOLLWORMS (Heliothis spp.) - ALABAMA - Various larval stages ranged 2-10 per large cotton plant on heavy top crop of squares, blooms, and bolls in two 40-acre Sumter County fields. Control efforts ended 15 days ago and flight of moths followed where predators or parasites about nil. (Lashley et al.).

BEET ARMYWORM (Spodoptera exigua) - ALABAMA - Several masses of developing larvae (5-25 per mass) leaf and square feeding per plant in second-growth cotton in three Macon County fields; 10-25 percent of plants affected but no damage expected at this late date. (McQueen).

BANDEDWING WHITEFLY (Trialeurodes abutilonea) - ALABAMA - Eggs, nymphs, and adults heavy on all cotton plants in three large Macon County fields; ranged 25-200 per leaf. (McQueen).

POTATOES, TOMATOES, PEPPERS

BEET ARMYWORM (Spodoptera exigua) - DELAWARE - All larval instars common on foliage of sweet peppers in eastern Kent County. This is second or third brood of this new pest on peppers this season in region. (Graustein).

TOMATO PINWORM (Kieferia lycopersicella) - TEXAS - Heavy in tomatoes in Brazos County. (Cole).

GENERAL VEGETABLES

BEET ARMYWORM (Spodoptera exigua) - MISSISSIPPI - Larvae of this species and S. ornithogalli (yellowstriped armyworm) averaged less than one per row foot in 400 acres of spinach in Issaquena County. Population ratio of S. exigua to S. ornithogalli 4:1. Treatments applied before field survey. (Robinson). ARIZONA - Treatments applied to lettuce in Yuma County for mixed populations of S. exigua, Trichoplusia ni (cabbage looper), thrips, and grasshoppers. Foil barriers being erected around fields to stop migrations of Estigmene acrea (saltmarsh caterpillar). (Ariz. Coop. Sur.).

DECIDUOUS FRUITS AND NUTS

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Heavy populations replacing Datana spp. on nursery pecan plantings near Artesia, Eddy County. (N.M. Coop. Rpt.). TEXAS - Extensive damage to pecan foliage noted throughout most counties in Uvalde area. Light damage noted in Brazos, Burleson and Travis Counties. (Stewart, Green).

YELLOWNECKED CATERPILLAR (Datana ministra) - TEXAS - This pest and Datana integerrima (walnut caterpillar) caused heavy damage to pecan foliage in Brazos County. (Harris, Green).

PECAN WEEVIL (Curculio caryae) - OKLAHOMA - Heavy on pecans in Pontotoc County. (Okla. Coop. Sur.). TEXAS - Larvae emerged at Grandbury, Hood County, and at Junction, Kimble County. (Harris).

ORNAMENTALS

A THRIPS (Taeniothrips eucharii (Whetzel)) - GEORGIA - One specimen collected on blue sticky board at Double Cabins experimental farm in Spalding County September 8, 1970, by R.J. Beshear. Due to poor condition, specimen determined Taeniothrips prob. eucharii by S. Nakahara March 30, 1973. One specimen collected on Ipomoea sp. (morningglory) at same location September 11, 1973, by J.O. Howell and S. Nakahara. Determined as T. eucharii by S. Nakahara. This is only known infestation in continental United States. T. eucharii has been recorded from China, Formosa, Japan, Hawaii, Bermuda, and was intercepted on one occasion from the Netherlands. Hosts are Amaryllis, Antirrhinum majus, Crinum, Dianthus, Freesia, Helichrysum bracteatum, Hymenocallis, Iris, Lamium, Lilium, Lycoris, Narcissus, Rohdea japonica, and Teucrium. This thrips is often intercepted on Lycoris bulbs from Japan and on cut flowers from Bermuda. (Nakahara).

A THRIPS (Taeniothrips hawaiiensis (Morgan)) - SOUTH CAROLINA - Collected on Lonicea sp. at Greenville, Greenville County, September 21, 1973. This is a new State record. GEORGIA - Collected on unknown host at Perry, Houston County, September 12, 1973. This is a new county record. Collections and determinations by S. Nakahara. This species presently known from Florida, Georgia, and South Carolina. (Nakahara). For first reports in continental United States see CEIR 23(20):287. (PPQ).

FOREST AND SHADE TREES

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - VIRGINIA - Active in numerous spots of shortleaf and Virginia pines of 0.1-0.5 acre on U.S. Forest Service land in southeastern Rockbridge County. (Va. For. Pest Surv. Rpt., Aug.). Activity continued relatively static, with some localized increases in occasional counties. On Cumberland State Forest (15,000 acres), where concerted attempt to control all spot infestations has continued since July, total of 29 new spot infestations located by aerial survey October 12; this is marked reduction in total spot infestations over previous surveys. This reflects intensive salvage effort and relatively static current conditions of populations. Survey flight October 4 over Sussex County in Coastal Plain showed increase in number of spot infestations in Waverly area; some spots about one acre or more in size. Survey September 27 in Chesterfield County showed 12

spot infestations averaging 0.1 acre per spot. Infestations in Powhatan and Goochland Counties most severe in this area. (Va. Div. For., Sept.). NORTH CAROLINA - Total of 4.8 million board feet of timber and 9,150 cords of pulpwood salvaged from State and private lands during period July 1 through August 31 as result of damage by southern pine beetle. Also, 442,000 board feet of timber and 296 cords of pulpwood salvaged from Federal land during same period. Majority of activity continues in Piedmont and mountain areas of State. (Southeast. For. Pest Rpt.). SOUTH CAROLINA - Aerial and ground surveys during July confirmed extensive outbreak in 20 counties involving 3,775,000 acres with 121,800,000 board feet and 270,700 cords killed. Additional surveys in late September revealed infestation in upper northwestern McCormick County. Total now 3,825,000 infested acres in 21 counties. Estimated timber kill since July now 125,000,000 board feet and 300,000 cords. In July, State Commission of Forestry declared existence of forest pest outbreak, designated control zone, and began to coordinate tree salvage and beetle supression program to minimize losses. Effort will continue until outbreak subsides. All State parks within infested zone and Lexington and Georgetown Counties resurveyed since July and August to locate new spots. Salvage summary figures by month: July - 2,120 cords, 1,430,000 board feet; August - 1,023 cords, 15,320 board feet; September - 7,609 cords, 428,943 board feet; totals - 10,752 cords and 1,874,250 board feet. (S.C. State Comm. For.).

Damage by southern pine beetle continues severe throughout Southeast. Epidemic situations reported in wide band from Texas to Virginia. (For. Pest Newsltr., Oct. 10).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - WEST VIRGINIA - Infested 10 percent of Scotch pines on one 6-acre planting and 50 percent of Scotch pines in 50-acre planting in Mercer County. (Gibson). SOUTH CAROLINA - Medium and caused some damage to pines in localized area of Orangeburg County. This is a new county record. (McCaskill).

A SOFT SCALE (Toumeyella pini) - MISSISSIPPI - Collected from slash pine in Greene County during late September by W.W. Neel. Determined by G.W. Dekle. This is a new county record. (Neel).

WALKINGSTICK (Diapheromera femorata) - OKLAHOMA - Heavy defoliation of oaks and other hardwood trees reported in some areas of Ouachita National Forest, Le Flore County. (Okla. Coop. Sur.).

MAN AND ANIMALS

HORN FLY (Haematobia irritans) - OKLAHOMA - Averaged 300 per head on cattle in Payne County, ranged 300-500 per head in Ellis County. Reported heavy in Comanche and Marshall Counties, moderate in Pontotoc County. (Okla. Coop. Sur.). TENNESSEE - Ranged 300-500 per head on herd of Angus cattle in Warren County. (Eisler, Cole).

STABLE FLY (Stomoxys calcitrans) - OKLAHOMA - Ranged 1-2 per head on cattle checked in Payne County. (Okla. Coop. Sur.).

A LOUSE FLY (Hippobosca longipennis) - CALIFORNIA - Single specimen noted on young cheetah October 12 at San Diego Wild Animal Park, San Pasqual, San Diego County. Entire compound treated September 27 (see CEIR 23(41):704). Periodical eradication treatment underway. Establishment of this pest poses serious threat to man as well as domestic animals and wildlife. (Cal. Coop. Rpt.). See CEIR 23(11): 159.

A VESPID WASP (Vespula diabolica) - MONTANA - Large numbers of this species and other wasps caused stoppage of construction on railroad in Big Horn County. (Pratt).

GREATER WAX MOTH (Galleria mellonella) - OKLAHOMA - Destroyed 3 bee hives in Adair County. (Okla. Coop. Sur.).

BENEFICIAL INSECTS

A BRACONID WASP (Chorebus rondanii (Giard)) - MASSACHUSETTS - Reared from puparia of Ophiomyia simplex (asparagus miner) collected at South Deerfield, Franklin County, during May 1973 by J.L. Capinera. Determined by P.M. Marsh. This is a new United States record. Introduction of C. rondanii into U.S. was probably accidental. (Jensen, Capinera).

DETECTION

New United States Records - A BRACONID WASP (Chorebus rondanii (Giard)) - MASSACHUSETTS - Franklin County. (p. 729). A THRIPS (Taeniothrips eucharii (Whetzel)) - GEORGIA - Spalding County. (p. 727).

New State Record - A THRIPS (Taeniothrips hawaiiensis) - SOUTH CAROLINA - Greenville County. (p. 727).

New County Records - EUROPEAN CORN BORER (Ostrinia nubilalis) TENNESSEE - Hamilton, Carroll, Benton, Decatur (p. 723-724). PINE NEEDLE SCALE (Phenacaspis pinifoliae) SOUTH CAROLINA - Orangeburg (p. 728). A SOFT SCALE (Toumeyella pini) MISSISSIPPI - Greene County. (p. 728). SOUTHWESTERN CORN BORER (Diatraea grandiosella) KENTUCKY - Hart (p. 724). A THRIPS (Taeniothrips hawaiiensis) GEORGIA - Houston (p. 727).

CORRECTIONS

CEIR 23(32):542, 543 - Records of a Few Aphids in Hawaii and DETECTION - New State Records - Dactynotus pseudambrosia should read Dactynotus pseudambrosiae.

CEIR 23(40):688 - MIMOSA WEBWORM (Homadaula anisocentra) - OKLAHOMA - Delete note. Subsequent observations indicate observed damage not caused by this pest. (Okla. Coop. Sur.). Also delete from New County Records on page 691. (PPQ).

CEIR 23(40):693 - Insects Not Known to Occur in the United States - SOUTH AFRICAN GRAIN BUG (Macchiademus diplopterus (Distant)) - Credit on page 694 is incorrect. Should read: Jon L. Herring. Systematic Entomology Laboratory, ARS, USDA. c/o U.S. National Museum, Washington, D.C. 20560. For corrected copy, see pages 733 and 734 in this issue. (PPQ).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (black cutworm)	Estigmene acrea (saltmarsh caterpillar)	Euxoa auxiliaris (army cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege rantalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainesville 10/12-18			BL	1				1												1	1			
KANSAS																								
Great Bend 10/11-15			BL	1		46	3			18								1	4			1		
Tribune 10/8			BL	16		6	4			24								2	6			2		
MISSISSIPPI																								
Stoneville 10/12-18	45-88	2.38	2BL	80				188	17	67								5	128	1780	427	35	39	
PENNSYLVANIA (Districts)																								
Northwest 10/9-16			BL	2						4									8					
Southeast 10/9-16			BL	1						4							2		1		2	12		
TENNESSEE (Counties)																								
Gibson 10/15-19			BL	6				1	2	10									4		5	3	5	
Hardeman 10/15-19			BL	3					1	4									3			5	7	
WISCONSIN																								
Lancaster 10/10-15			BL							40							9		1					
Mazomanie 10/11-15			BL							3							17		2					

General Vegetables - BEET ARMYWORM (Spodoptera exigua) larvae moderate to heavy on 1.2 acres of green onions at Waianae, Oahu; up to 60 percent of leaves infested or damaged. Larvae and damage light on adjacent small planting of bitter melon; about 5 percent of fruits lightly affected. (Kawamura).

Man and Animals - MOSQUITO collections during September from 57 light traps operated on Oahu totaled 388 Aedes vexans nocturnus and 1,939 Culex pipiens quinquefasciatus. Aedes catches ranged 0-188 and Culex ranged 0-784. Both high catches occurred at Kahaluu. (Mosq. Control Br., State Dept. Health).

Beneficial Insects - BRACONID WASPS (Opius importatus and O. phaseoli) parasitized 71-100 (average 95) percent of Melanagromyza phaseoli (bean fly) that affected snap bean and cowpea petioles collected from various areas on Kauai during September. Infested snap bean material collected at Waikapu, Maui, revealed 100 percent parasitism by O. importatus. (Sugawa, Miyahira). Survey of sourbush flowers (Pluchea sp.) at various areas on Hawaii revealed average infestation of 78 percent by SOURBUSH SEED FLY (Acinia picturata). This tephritid purposely introduced from Guatemala in 1959 to aid in control of Pluchea spp. (Yoshioka).

Miscellaneous Pests - Spotty moderate GIANT AFRICAN SNAIL (Achatina fulica) activity noted at Poipu, Kauai, during September following brief rainstorm. Baiting increased at these spots, but subsequent surveys disclosed poor response due to insufficient moisture. However, appreciable extension of infestation noted during period. At Wahiawa, drought conditions prevailed and no snail activity noted. Despite shower activity on Hawaii during this period, no snails observed at Kailua Kona. (Sugawa, Yoshioka).

Fruits and Nuts - CHINESE ROSE BEETLE (Adoretus sinicus) about completely defoliated small experimental grapevine planting at Pahala, Hawaii. Numerous dead adults noted at bases of recently planted vines which had been treated. (Matayoshi).

Weather of the week continued from page 722.

Wednesday morning lows pushed the first frosts into parts of the South. Falmouth, Kentucky, recorded 27 degrees. Hibbing, Minnesota, recorded 23 degrees for the Nation's cold spot. While Wednesday was cool in most places, new record highs were chalked up in the Southwest--Phoenix, Arizona, 99 degrees, Flagstaff, Arizona, 78 degrees. Thursday, cold struck closer to the Atlantic. Salisbury, Missouri, had 32 degrees for the 2 a.m. low but as morning progressed it fell to 30 degrees at Richmond, Virginia, and Raleigh, North Carolina. Augusta, Georgia, fell to 34 degrees equalling the record low. By 2 p.m., Marquette, Michigan, shivered at only 40 degrees, the national low, while Thermal, California, roasted at 97 degrees, the Nation's hottest spot. Overnight Thursday and Friday, subfreezing temperatures were recorded in the west-central Rockies, eastern Great Lakes area, and eastern Ohio Valley. The 40's were common over a wide swath of the Nation. About the same story repeated itself the next night. Hibbing, Minnesota, was the Saturday morning cold spot with 29 degrees; however, on Saturday, the 40's extended into southern Alabama and Texas. However, the sun warmed things to the 70's and 80's in many areas. Sunday morning the cold reached farther south. Tallahassee, Florida, began the day at 56 degrees while it was coldest, 30 degrees, at Alpena, Michigan.

PRECIPITATION: A huge High, centered on Alberta as the week began and over New York as it ended, dominated last week's weather. It brought cool, dry Canadian air to most States. In fact, Wednesday there was no thunderstorm anywhere in the 48 contiguous States, the first thunderstormless day in several months. Ironically, floods were reported in several areas the same day--runoff from some of last weeks torrential rains. While widely scattered showers dampened northern border States, Texas and the delta area got most of Monday's rain. Over 1 inch of rain fell near Shreveport, Louisiana, mostly in 6 hours in the morning. Through Tuesday morning, most of the Nation's rain fell again on Texas delta locations--Greenwood, Mississippi, 1.95 inches; Waco, Texas, 1.05 inches; Eldorado, Arkansas, 0.60 inch. Later Tuesday, a week-long rain started to end in east Texas leaving rivers flooded. The Nueces River had more than 10 feet of overflow while the lower Guadalupe was 9 feet out of its banks. Wednesday was a day of widespread dryness. The most morning rain was 0.13 inch at Erie, Pennsylvania. Although it sprinkled at a few eastern Great Lakes locations, not a single thunderstorm erupted--the first time the 48 contigous States have been a whole day without a thunderstorm in some months. However, rivers in Texas and Missouri swelled by last weeks torrential rains, flooded from runoff under clear skies. Also, tropical storm Gilda was born in a depression about 425 miles south of Miami, Florida, and 140 miles south of Cuba's south-central coast. By early Thursday evening, Gilda moved over central Cuba with winds at 60 m.p.h. By early Friday afternoon, the storm was north of Cuba 240 miles south of Miami, Florida. It spread showers across southeast Florida. By Saturday night, Gilda had moved away from the United States through the Bahamsas. Meanwhile, a continent away in the Pacific Northwest rain appeared about midday Friday and rapidly moved inland to Idaho. Quillayute, Washington, had 1 inch of rain Saturday morning. Sunday morning, Brookings, Oregon, had 1.89 inches of rain. Many other north-western locations recorded rain, mostly under 0.33 inch. At 2 p.m. Sunday, Brookings had 2.50 inches of rain for the previous 24 hours. The Northwest had clouds and rain. A few sprinkles wet Florida, otherwise Sunday was clear and sunny in most places.

SOUTH AFRICAN GRAIN BUG (Macchiademus diplopterus (Distant))

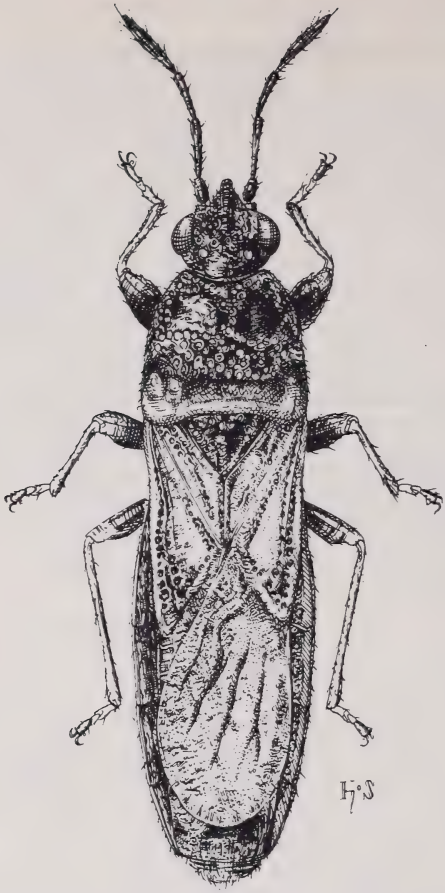
Economic Importance: This lygaeid is one of the more important pests of small grains in South Africa. The adults and nymphs suck the sap from the young plants and later attack the developing grains. Although primarily a grain pest, the species is also a fruit feeder, at least in the adult stage. It has been recorded from "prune trees" and taken on the flower end of a pear. Specimens from South Africa have been intercepted at New York City, Philadelphia, and Washington, D.C., quarantine stations on a number of occasions since 1937 on wheat, peaches, apricots, apples, pears, and grass seed. On fruit, the insects apparently enter at the stem scar and are often found near the seed. It has been shown by Myburgh and Kriegler that this pest is extremely cold hardy. From the results of exposure to the constant low temperatures normal during transport, it was estimated that complete mortality would require the continuation of cold storage at 31 and 34 degrees F. for six and ten weeks, respectively. These are periods well beyond the reasonable storage life of peaches and apricots. It therefore seems likely that this pest could become established in countries much colder than South Africa.

Hosts: Wheat, oats, barley, grass seed, apples, apricots, peaches, plums, and pears.

Distribution: Known only from the Republic of South Africa, aside from interceptions.

Life History and Habits: Eggs are laid from the end of August, earlier in warmer areas, inside the leaf sheath of wheat, in masses of 14-25, the females laying 50-150 each. The nymphs hatch in a month and become adults in six weeks; both stages occur together in large numbers. Adults fly in tremendous numbers at temperatures above 70 degrees F. and migrate when the wheat ripens; some aestivate in the stems or under the bark of fruit trees or under plants or in thatch. The adult bugs leave these summer shelters and congregate on wheat as soon as it emerges from the soil. Observations have shown that this bug develops on several wild grasses found in orchards, as well as on cultivated cereals. There is but one generation per year.

Description: ADULT - Length 3.6-4.2 mm. Head, pronotum, scutellum black, shining, evenly and distinctly punctured except on the large calli; abdomen dark chestnut brown to black. Hemelytra white except apex of corium, corial, and claval margins and veins chestnut brown to black. Antennae and femora black, the latter contrasting sharply with the yellowish tibiae. The more important recognition characters are deep median mesosternal furrow, fore femora each with one ventral spine, labium extending posteriorly only onto extreme anterior portion of mesosternum, second segment exceeds base of head for one-third its length; apical corial margins straight, lateral margins slightly sinuate; body rather flat, nearly linear, pronotum conspicuously tapering anteriorly, posterior margin nearly straight mesally with posteriorly produced lateral lobes.



Adult of Macchiademus diplopterus (Distant)

Illustration from Slater and Wilcox page 103.

References: 1. Anonymous. 1955. Coop. Econ. Ins. Rpt., USDA, Agr. Res. Serv. 5:876. 2. Giliomee, J.H. 1959. Grain stink-bug can be controlled effectively. Farming in S. Afr. 35(3):47-48. (RAE 49:153). 3. Slater, J.A. 1964. Hemiptera (Heteroptera) Lygaeidae. S. Afr. Animal Life 10:103. 4. Slater, J.A. and D.E. Wilcox. 1973. The Chinch Bugs or Blissinae of South Africa. Memoir 12. Ent. Soc. Southern Africa. pp. 102-106. 5. Myburgh, A.C. and P.J. Kriegler. 1967. The grain stink-bug, Blissus diplopterus Dist., as a pest of export fruit, with special reference to its cold-hardiness. J. Ent. Soc. Afr. 29:90-95. (RAE 57:699).

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The Strange Fate of the "Serpentine Leaf Miner" (*Liriomyza* spp., Agromyzidae, Diptera)

George C. Steyskal 1/

In 1955 "serpentine leaf miner" was the approved common name (Sailer, 1955) listed for *Liriomyza pusilla* (Meigen). Shortly thereafter it was found that *L. pusilla* does not occur in America, and in later lists (Blickenstaff, 1965, 1970) that common name was cited for *L. brassicae* (Riley), a species originally described from North America and now known to occur in most parts of the world.

Liriomyza brassicae, however, is only one of several species confused under the old "serpentine leaf miner" designation. Frick (1957) described *L. munda* for a large part of the old concept, and *L. trifolii* (Burgess) was shown by Spencer (1965) to be part of a closely related complex including *munda*. In 1970, *L. munda* appeared in the common names list (Blickenstaff, 1970) as "vegetable leafminer." In the key to species of *Liriomyza* by Frick (1959), perhaps all 12 of the species following couplet 25 could be included in what he termed the "*pusilla* complex," as well as a few species described later. The following North American species of this group are included by Spencer (1973), together with their latest synonymy, in his important new book on Agromyzidae of economic importance:

Liriomyza brassicae (Riley, 1884) (synonyms: *L. cruciferarum* Hering, 1927; *Phytomyza mitis* Curran, 1931; *L. hawaiiensis* Frick, 1952; *L. bulnesiae* Spencer, 1963).

L. sativae Blanchard, 1938 (synonyms: *L. pullata* Frick, 1952; *L. canomarginis* Frick, 1952; *L. minutiseta* Frick, 1952; *L. munda* Frick, 1957; *L. guytona* Freeman, 1958; ? *L. phaseolunata* Frost, 1943). From examination of the type specimen in the U.S. National Museum I can add to this synonymy *Liriomyza propepusilla* Frost, 1954, NEW SYN.

L. trifoliearum Spencer, 1973.

L. trifolii (Burgess, 1880) (synonyms: *L. trifolii* Meijere, 1925; *L. alliovora* Frick, 1955).

The following species is also very similar to the above group:

L. huidobrensis (Blanchard, 1926) (synonyms: *L. cucumifoliae* Blanchard, 1938; *L. langei* Frick, 1951; *L. dianthi* Frick, 1958). This species was erroneously determined for a while as *L. bryoniae*. The common name "pea leafminer" was chosen for *L. langei* (Blickenstaff, 1970), but now Spencer notes a wide range of hosts.

It may be noted that the species that have for some time been known in North America as *L. munda*, *L. langei*, and *L. dianthi* are now under new, prior names, which were first applied to specimens from Argentina. These flies are mostly widespread species and are polyphagous, that is, they feed upon several or many different hosts. They are so similar in appearance to each other that

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examination of the male genitalia under magnification of at least 80x is often needed for their determination. It is only natural that a few changes in names are necessary when our knowledge of the flies has expanded as much as it has in the last couple of decades. If any common name is to be used for these flies, it would seem futile to do so for any single species, but rather to use "serpentine leafminer" for any species of Liriomyza.

Literature Cited

Blickenstaff, C.C. 1965. Common names of insects approved by the Entomological Society of America. Bull. Entomol. Soc. Am. 11(4):287-320.

_____. 1970. Idem. 36 pages (separate publication). Entomol. Soc. Am.

Frick, K.E. 1957. Nearctic species in the Liriomyza pusilla complex, No. 2, L. munda and two other species attacking crops in California (Diptera, Agromyzidae). Pan-Pacific Entomol. 33:59-70.

_____. 1959. Synopsis of the species of agromyzid leaf miners described from North America (Diptera). Proc. U.S. Natl. Mus. 108:347-465.

Sailer, R.I. 1955. Common names of insects approved by the Entomological Society of America. Bull. Entomol. Soc. Am. 1(4):1-34.

Spencer, K.A. 1965. A clarification of the status of Liriomyza trifolli (Burgess) and some related species. Proc. Entomol. Soc. Wash. 67:32-40.

_____. 1973. Agromyzidae (Diptera) of economic importance. xi + 418 pages. Dr. W. Junk B.V. (Ser. Entomol. 9). The Hague.

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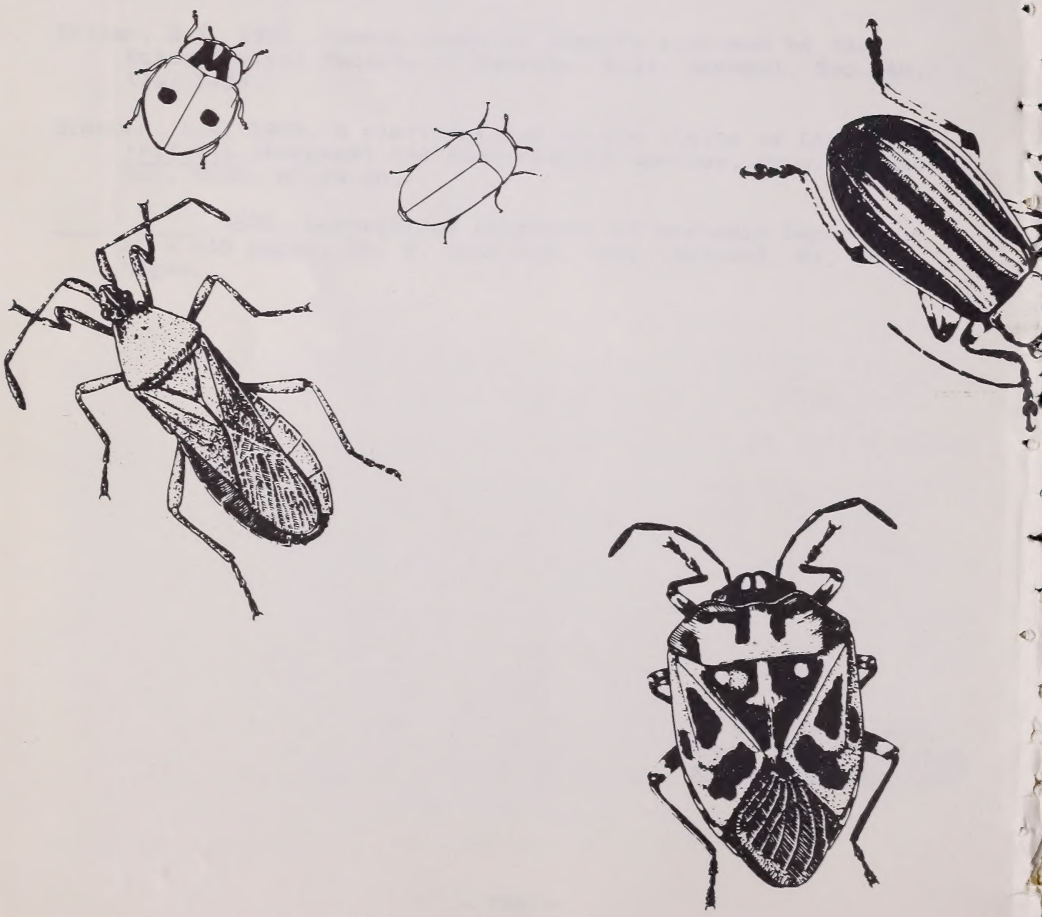
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